



Project ECO2CEE

(prev. EU CCS Interconnector)



*Carbon Sequestration Leadership Forum 2023
Technical Group Mid-Year Meeting and Workshop on CCUS in Central and Eastern Europe
13-14 June 2023*

ORLEN Group – leading multi-utility player in Central Europe



Upstream



~1,280 mboe

2P crude oil and gas reserves
reserves in Canada, Poland, Norway,
Pakistan and Lithuania

~191 k boe/day

of average hydrocarbon production
in Canada, Poland, Norway, Pakistan
and Lithuania

Refining



7 refineries

in Poland, the Czech Republic
and Lithuania

~37m tonnes

annual crude throughput
– regional leader

~0.3m tonnes

of biofuel output

Petrochemicals



40

petrochemical products, marketed
in over 60 countries

16%

share of advanced products
in the portfolio

Gas distribution, trading and storage



>3.2 bcm – capacity

of gas storage facilities

~14 bcm of imports

of natural gas to Poland (including LNG)

206 LNG deliveries

(58 in 2022; 5.8 bcm after regasification)

**>200,000 km of distribution
network**

for natural gas (including connections)

>11.3 bcm

of natural gas distributed

Retail



~3,100 service stations

in six countries

~2,500

non-fuel outlets

>15m customers

of fuel stations in the region

>3m customers

of electricity

>7m customers

of natural gas

Energy



~5.1 GW

installed capacity, including ~0.7 GW
in renewables and ~1.7 GW
in gas-fired units

~200,000 km

of power lines

ORLEN 2030 leads the Energy transition in Central Europe



25% absolute reduction in CO₂e emissions

from refining, petrochemicals and upstream by 2030¹

Diversified portfolio

Fuels, gas, electricity, petrochemicals, e-mobility and renewable hydrogen

Leader of energy transition in the region



International leader in renewable energy



Supplier of multi-utility products tailored to customers' needs



Stable and sustainable source of value creation over the next decades



~40%

of capex in 2023–2030 to be spent on green projects

~PLN 400 bn

Realization of full cumulated EBITDA potential in 2023–2030

1. For Scope 1 and 2 emissions.

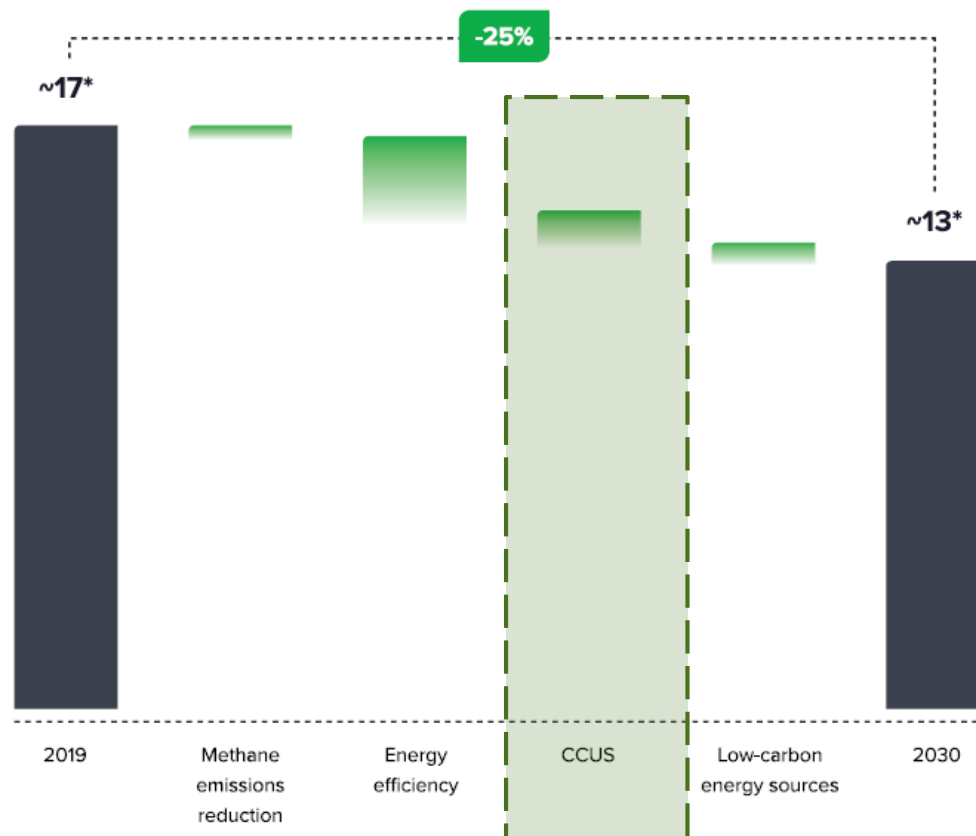
Reduction of 25% absolute emissions in Refining, Petrochemicals and Upstream by 2030



The 25%¹ reduction target reflects:

- reduction of methane emissions and of flaring in upstream operations – Zero Routine Flaring and Zero Venting targets
- implementation of energy efficiency solutions
- deployment of carbon capture, utilization and storage technologies (CCUS)
- use of energy from low- and zero-carbon sources in the Refining, Petrochemical and Upstream facilities

GHG emissions in Refining, Petrochemicals and Upstream (MtCO₂e)



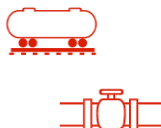
1. The target applies to Scope 1 and 2 greenhouse gas emissions in Refining, Petrochemicals and Upstream, calculated on an equity share basis.

* Emissions volume in the base year will be subject to final review after the merged ORLEN Group companies are fully consolidated.

SCOPE OF WORK



**Multi-modal export/import
CO₂ Terminal in Poland**



**CO₂ transport infrastructure
in Poland and Lithuania**

STAGE 1

**Volume: ~ 3 MTPA
Time: 2027 - 2030**

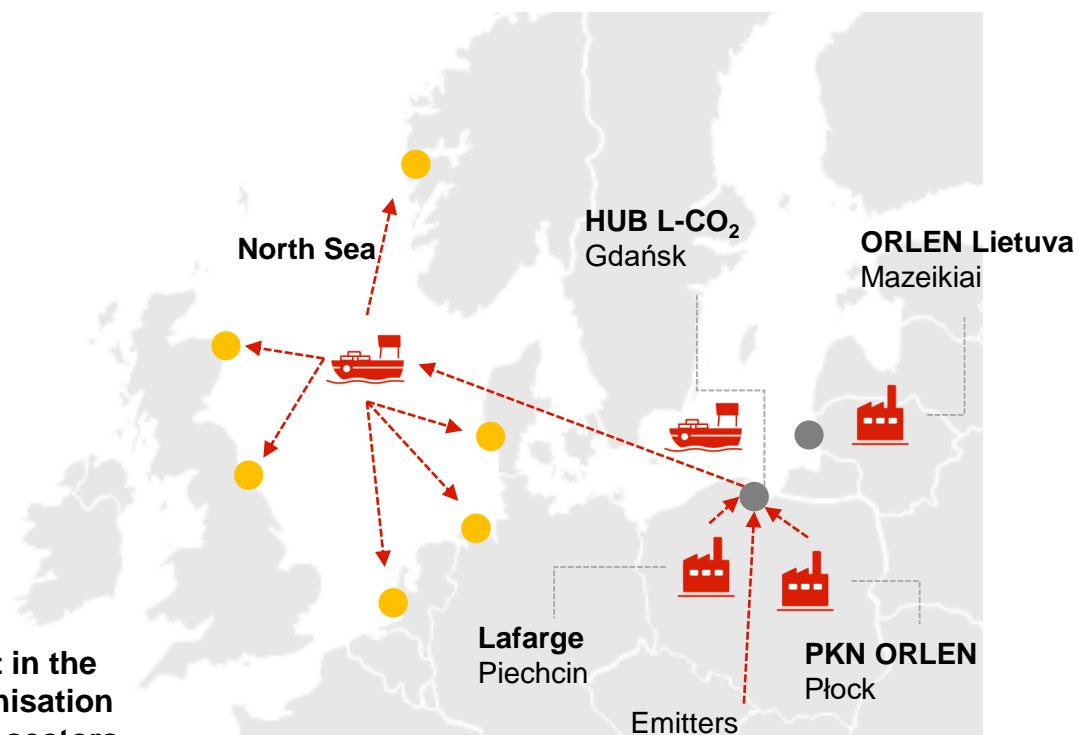


STAGE 2

**Volume: ~ 9 MTPA
Time: 2030+**



Development of an open access CCS concept in the CEE region with potential to facilitate decarbonisation and address competitiveness of high emission sectors in Lithuania and Poland



Emitters



STAGE 1 EMITTERS



**OTHER
COMPANIES**

VOLUME

up to 1 MTPA

up to 1 MTPA

up to 1 MTPA

LOCATION

Kujawy Cement Plant

Refinery Plant Płock

In radius 250 km

ADDITIONAL
INFORMATION

Go4ECOPlanet
Obtained funds from
Innovation Fund

In the middle of License and
Basic Design Package (BDP)
bidding process for Carbon
Capture Unit

Hydrogen Unit

in discussion

Project status

**DONE**

- 5th list of Project of Common Interest (PCI),
- Location Study – confirmed place of CO₂ Terminal – Gdańsk,
- Cooperation plan between Poland and Lithuania signed.

**IN
PROGRESS**

- Feasibility Study for the rail transportation of CO₂,
- Application procedure for 6th list of Project of Common Interest (PCI)
- Application for the CEF-Energy „Studies” funds.

TO DO

- Feasibility Study for the maritime transportation of CO₂ (from CO₂ Terminal to place of sequestration),



ORLEN

POWERING THE FUTURE

Sustainably